PRACTICE TEST 5 - CHAPTER 10 &11

Beginning and Intermediate Algebra by Elayn Martin-Gay, 6th edition

Reminder: Graphing Calculators will NOT be allowed on MATH 0362 tests

1. Use the product rule to multiply: $\sqrt{3x}\cdot\sqrt{2}$

2. Use the quotient rule to simplify: $\sqrt{\frac{21}{100}}$

3. Use the quotient rule to simplify: $\sqrt{\frac{2x^2}{49y^8}}$

4. Use the quotient rule to divide. Then simplify if possible: $\frac{3\sqrt[3]{250a^7}}{\sqrt[3]{2a}}$

5. Subtract the following radicals: $10\sqrt{75}-2\sqrt{28}-2\sqrt{27}$

6. Multiply. Assume that all variables represent positive real numbers: $(7\sqrt{x}-7)(6\sqrt{x}-4)$

7. Rationalize the denominator and simplify: $\frac{2\sqrt{3}}{\sqrt{7}}$

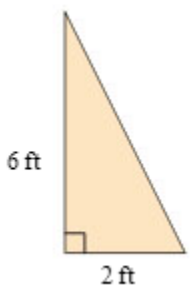
8. Rationalize the denominator and simplify: $\frac{2}{5-\sqrt{10}}$

9. Solve the radical equation: $\sqrt{4x-3}=5$

10. Solve the radical equation: $\sqrt{5x-4}-2=2$

11. Solve the radical equation: $\sqrt{11-x}=x+1$

12. Find the length of the unknown side of the triangle:



13. Simplify, using i notation as needed: $\sqrt{-54}$

14. Add and write answer in a+bi form: $(2-8i)+(9+5i)$

15. Multiply and write answer in a+bi form: $5i(3-4i)$

16. Multiply and write answer in a+bi form: $2i(5-8i)$

17. Multiply and write answer in a+bi form: $(2-5i)^2$

18. Solve using the quadratic formula: $x^2+5=6x$

19. Solve using the quadratic formula: $x^2-6x+13=0$

20. Solve using the quadratic formula: $2x^2+7x-4=0$

21. Solve using the quadratic formula: $(x+4)(x+2)=7$

22. Find the vertex of the graph of this quadratic function: $f(x)=x^2+2x-8$

Practice Test 5 Chapter 10, 11 Answers

1. $\sqrt{6x}$
2. $\frac{\sqrt{21}}{10}$
3. $\frac{x\sqrt{2}}{7y^4}$
4. $15a^2$
5. $44\sqrt{3}-4\sqrt{7}$
6. $42x-70\sqrt{x}+28$
7. $\frac{2\sqrt{21}}{7}$
8. $\frac{10+2\sqrt{10}}{15}$
9. $x = 7$
10. $x = 4$
11. $x = 2$
12. $2\sqrt{10}$
13. $3i\sqrt{6}$
14. $11-3i$
15. $20+15i$
16. $16+10i$
17. $-21-20i$
18. x = 1 and x =5
19. $x = 3+2i \text{ or } x = 3-2i$
20. $x = -4 \text{ or } x = \frac{1}{2}$
21. $x = -3 + 2\sqrt{2}, x = -3 - 2\sqrt{2}$
22. $(-1,-9)$